


P.A. – S.p.A. – EQUIPAGGIAMENTI TECNICI DEL LAVAGGIO

VIA MILANO, 13 – CASELLA POSTALE 115 – 42048 RUBIERA (REGGIO EMILIA) – ITALY
 Tel. +39 0522 623611 – Fax. +39 0522 629600 – R.E.A. RE 156319 – R.I. RE11535 – Mecc. RE 013446
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 ART. 2497 – BIS C.C. DIREZIONE E COORDINAMENTO BENETTI srl R.I. TRIB. DI RE 01480690351
 Web: <http://www.pa-etl.it> – E-mail: info@pa-etl.it



VB 35 - Unloader Valve (discharging)

Technical manual: E 244

Pressure regulating unloader valve complete with metallic intake manifold.
 At gun shut off, the water flow is bypassed at reduced pressure.

DN 10


- **60.0850.00** VB 35 distance **x: 19.5 y: 62/73**
- **60.0855.21** VB 35 with injector

- Direct fitting to the pump by means of two hollow screws
- Sturdy steel and brass construction
- Adjustable locknut to control the max pressure
- Easy maintenance
- Hexagonal shaped check valve to avoid jamming.
- Possibility to fit a venturi injector, on delivery, for chemicals.
- Plastic knob, upon request

Technical specifications

Part Number	Rated pressure	Max. flow rate: 25 l/min.		Max temperature: 90°C (1)		Outlet	Weight
		Permissible pressure	Minimum adjustable pressure	(2) Trapped pressure at circuit closure	(3) Pressure drop to reset bypass		
	bar - MPa	bar - MPa	bar - MPa	%	%		g
60.0850.00	220 - 22	250 - 25	22 – 2.2	7.5	19	G3/8 M	805
60.0855.21	220 - 22	250 - 25	22 – 2.2	7.5	19	G3/8 M	845

(1) The valve has been designed for a continuous use at a water temperature of 60°C. It can resist for short periods at a maximum temperature of 90°C.

(2) This is the maximum pressure increase implemented in the circuit for the intervention of the valve and to bring all the fluid in bypass (percentage figures of the pressure set up)

(3) This is the pressure reduction necessary in comparison to the set up, in order that the valve brings back pressure in the circuit. (percentage figures of the pressure set up)

Instruction manual, maintenance, installation, spare parts.	n. 12.9244.00
For a correct utilization, follow the directions of this manual	
Re-print them on the Use and Maintenance booklet of the machine.	

PROBLEMS AND SOLUTIONS

PROBLEMS	PROBABLE CAUSES	SOLUTIONS
Frequent unloader recycles	Damaged check valve O ring Leaking connections Restricted bypass	Replace Check and renew Clean or adapt
Unloader does not reach pressure	Unloader not properly sized Piston O rings worn out Material matter between seat and shutter Worn out nozzle	Change spring or type of valve Replace Clean the seat Replace
Pressure peaks	There is not a min of 5% of total flow in bypass Excessive flow in bypass Spring totally compressed	Reset Change type of valve or adjust passages Loosen knob and change nozzle
Unloader does not bypass at low pressure	Jammed check valve Check valve O ring worn out Material matter on check valve	Clean or replace Replace Clean

REGULATIONS : *see norm manual*

The accessory hereby described bears the CE marking in accordance with the Norms and Directives applied on the Declaration of conformity.

For a correct utilization, follow the directions described in this manual and re-print them on the Use and maintenance manual of the machine.

Make sure that you are given **the Original Conformity Declaration** for the accessory chosen. The present manual is valid for all unloader valves named **VB 35**.

MAINTENANCE

Maintenance has to be carried out by **Specialized Technicians**.

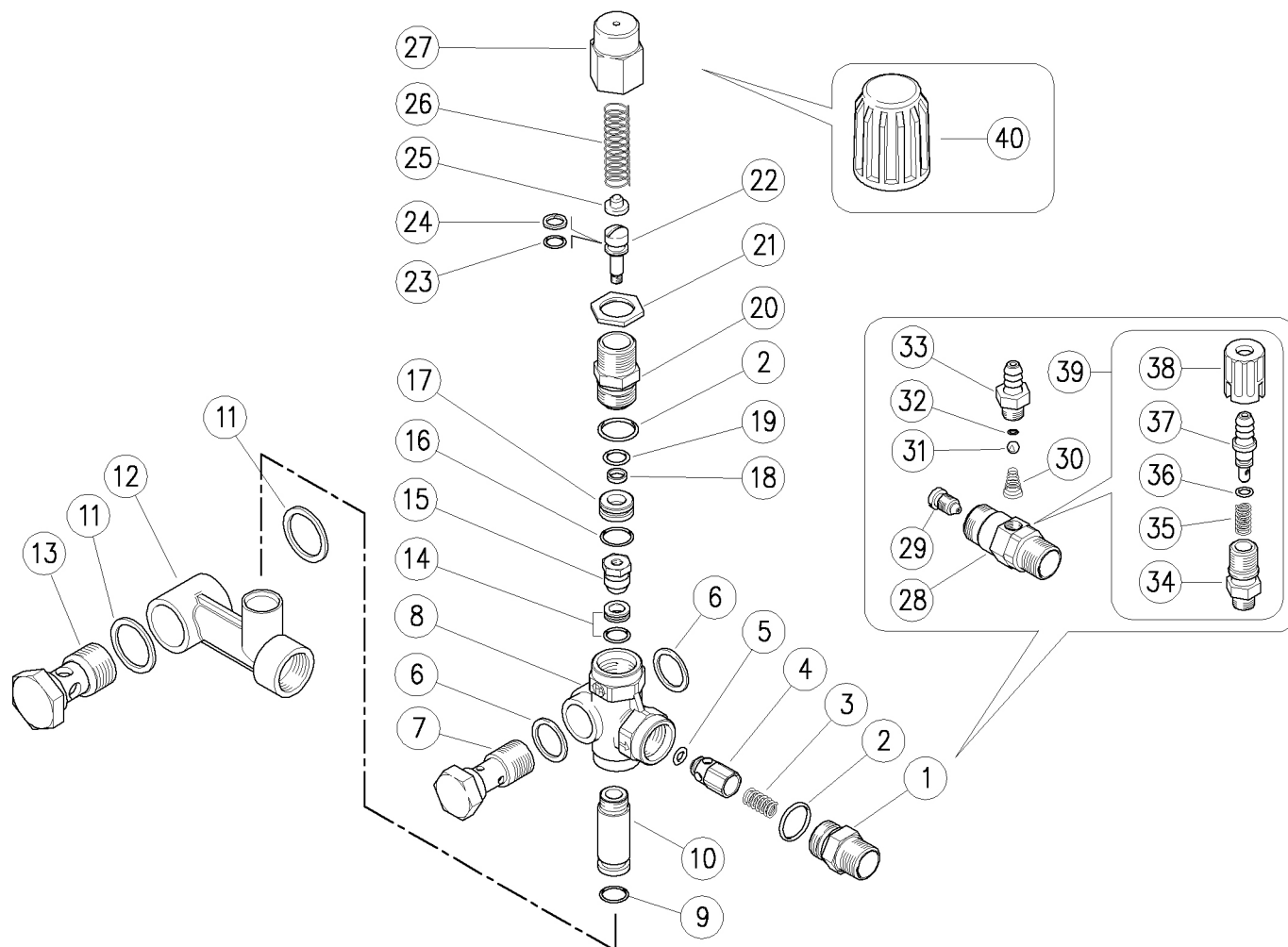
STANDARD: every 400 working hours (circa 10,000 cycles), check and lubricate the seals with water resistant grease.

SPECIAL: every 800 working hours (circa 20,000 cycles), control the wear of the seals and internal parts and if necessary, replace with original PA parts taking care during installation and to lubricate with water resistant grease.

ATTENTION: reassemble the valve in the correct manner paying special attention to the Nut (pos 21) which must always be in place.

The manufacturer is not to be considered responsible for damage as a result from incorrect fitting and maintenance

Technical data, descriptions and illustrations are indicative and liable to modification without notice



Pos.	P/N	Description	Q.ty	K1	K2	K3	K4		Pos.	P/N	Description	Q.ty	K1	K2	K3	K4	
1	60.1902.31	Shutter coupl., 3/8M Bsp brass	1					10	21	60.0317.31	Locknut, M18x1 brass	1					10
2	10.3066.00	O-ring, 1,78x15,6 mm	2	•				10	22	60.0331.99	Piston, M5 Sst.+or+p/back	1					10
3	60.0867.51	Spring, 0,5x6,5x22 mm Sst.	1					10	23	10.3055.00	O-ring, 1,78x7,66 mm	1	•				10
4	60.0859.99	Shutter pin, brass+or 2,5x4 mm N	1					10	24	10.4008.00	Back-up ring, opn. 8x11x1,2 mm	1	•				10
5	10.3125.00	O-ring, 2,5x4 mm	1	•				10	25	60.0310.61	Spring guide, z.pl.	1					10
6	14.4100.00	Sealing washer, 3/8 Bsp	2					10	26	60.0862.61	Spring, 3,3x12,6x41 mm z.pl.	1					25
7	60.0807.31	Pierced delivery screw, 3/8M Bsp brass	1					10	27	60.0304.31	Valve regulating knob, brass	1					5
8	60.0861.35	Valve housing -VB35, brass	1					1	28	21.0057.31	Inject.housing, M18x1-3/8MM Bsp (1)	1					2
9	10.3109.96	O-ring, 2,4x10,3 mm Vi 70	1					10	29	21.0054.51	Nozzle, M6x1 - 2,1 mm Sst.	1					10
10	60.0853.31	Manifold fitting, 15x42 mm	1					5	30	21.0160.511	Tapered spring, Sst. -inject., 25pcs	1					1
11	14.4101.00	Sealing washer, 1/2 Bsp	2					10	31	14.7420.01	Ball, 7/32" Sst. Aisi 316	1					10
12	60.0851.35	Valve manifold, 1/2F Bsp brass	1					3	32	10.3049.00	O-ring, 1,78x5,28 mm Vi 70	1					10
13	60.0804.31	Pierced crew, 1/2M Bsp 36,5mm brass	1					3	33	21.0003.31	Hose barb, 8 - M12x1 mm brass	1					10
14	60.0872.20	Seat, 7,5mm +O-ring, 1mm NBR	1	•				10	34	21.0173.31	Coupling, M12x1-1/4M Bsp brass	1					10
15	60.0871.21	Rest, M5 brass +ball, 11/32" Sst.	1	•				10	35	21.0158.51	Spring, 0,8x7x15 mm Sst.	1					10
16	10.3060.00	O-ring, 1,78x12,42 mm	1	•				10	36	10.3043.01	O-ring, 1,78x4,48 mm Vi 70	1					10
17	60.0863.31	Spacer ring, 6,2x16x6 mm brass	1					10	37	21.0155.99	Hose barb, d.8 mm brass+o-ring	1					3
18	10.4006.00	Back-up ring, 8,6x6x1,2 mm	1	•				10	38	21.0171.84	Inject.knob, 1/4F Bsp black	1					10
19	10.3051.01	O-ring, 1,78x6,07 mm	1	•				10	39	21.0100.00	Regul.+h.barb 8-M12mm brs. inje.	1					50
20	60.0303.31	Piston holder, brass	1					5	40	60.0315.841	Valve regul. knob, black 50pcs. **	1					1

** On request

Kit	P/N	Description	
K1	60.1906.24	Spares kit -VB3, 9x1pcs.	1

(1) 60.0855.21